



Planet	Average Temperature
Mercury	Range from -160 °C to +500 °C
Venus	477 °C
Earth	13 °C
Mars	-53 °C

Planet	Distance from Sun
Mercury	57,910,000 km
Venus	108,200,000 km
Earth	149,600,000 km
Mars	227,940,000 km

Some Atmospheric Data

Planet	Distance from Sun (km)	Day (h:m)	Atmosphere					
			Pressure (atm)	Mass (kg)	N ₂	O ₂	Ar	CO ₂
Mercury	5.791 E7	1407:6	none (10 ⁻¹⁵)					
Venus	1.082 E8	5833:12	90	4.8 E20	1.9%	trace	0.1%	98%
Earth	1.496 E8	23:56	1	5.15 E18	78%	21%	1%	0.03%
Mars	2.2794 E8	24:38	0.0064	2.5 E16	2.7%	0.13%	2%	95%



Earth vs Mercury



1. Mercury's atmosphere is very weak and, hence, has a very pronounced temperature variation.
2. No molecules in the atmosphere to keep temperature constant.
3. In planets with no atmosphere, all sunlight reaches the surface.
4. The temperature rises very quickly during the day but drops as quickly at night.



Earth vs Venus



1. Venus' albedo: 65% vs Earth's albedo: 30%
2. Of the $\frac{1}{3}$ sunlight absorbed, only 1% can escape into space.
3. Venus' atmosphere is about 100 times bigger than Earth's and has 300,000 times more CO_2 .
4. Even though Venus' clouds consist mainly of H_2SO_4 , they have enough water to help with the effect.

* Albedo: fraction of sunlight that is reflected from an object



Earth vs Mars



1. Mars is the farthest from the Sun.
2. Mars' atmosphere is about 1% the size of Earth's.
3. Most of Mars atmosphere is CO_2 , but it has no other greenhouse gases.
4. For a thin atmosphere, it is harder to keep temperature constant.